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11 with (bacteria or cyanobacteria or bacillus or
 acetobactor or citrobactor)

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20

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1

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<u>L6</u>	11 with (bacteria or cyanobacteria or bacillus or acetobactor or citrobactor)	6	<u>L6</u>
<u>L5</u>	L4 and sponge	2	<u>L5</u>
<u>L4</u>	L1 and (bacteria or cyanobacteria or bacillus or citrobactor or acetobactor)	66	<u>L4</u>
<u>L3</u>	L2 and bacteria	0	<u>L3</u>
<u>L2</u>	11 and sponge	19	<u>L2</u>
<u>L1</u>	(metal or mineral or gold or silver or copper) near6 (sea adj water)	658	<u>L1</u>

END OF SEARCH HISTORY

[Generate Collection](#)[Print](#)**Search Results - Record(s) 1 through 2 of 2 returned.**

-
- ☐ 1. 6054317. 30 Apr 97; 25 Apr 00. System for the cell culture and cryopreservation of marine invertebrates. McMahon; Peter. 435/404; 435/325 435/347 435/405 435/406 435/408. C12N005/06.
-
- ☒ 2. 5543034. 28 Aug 95; 06 Aug 96. Method of enhancing the growth of aquatic organisms, and structures created thereby. Hilbertz; Wolf H., et al. 205/688; 204/DIG.6 205/701 205/742. C02F001/461.
-

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Terms	Documents
L4 and sponge	2

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- ☐ 1. 6054317. 30 Apr 97; 25 Apr 00. System for the cell culture and cryopreservation of marine invertebrates. McMahon; Peter. 435/404; 435/325 435/347 435/405 435/406 435/408. C12N005/06.
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- ☐ 2. 5765968. 13 Dec 95; 16 Jun 98. Apparatus for eliminating and preventing marine growth on offshore structures. Lee; Choon Hwang. 405/211; 15/104.04 405/195.1. B63C011/52 B08B009/02.
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- ☐ 3. 5543034. 28 Aug 95; 06 Aug 96. Method of enhancing the growth of aquatic organisms, and structures created thereby. Hilbertz; Wolf H., et al. 205/688; 204/DIG.6 205/701 205/742. C02F001/461.
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- ☐ 4. 5489370. 28 Dec 93; 06 Feb 96. Removal of ions from a bulk source by electropotential ion transport using a host receptor matrix. Lomasney; Henry L., et al. 204/627; 204/280 204/640 204/647. C02F001/46 C02F001/469 G21F009/04 G21F009/16.
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- ☐ 5. 5453111. 08 Sep 94; 26 Sep 95. Method for separation of metals from waste stream. Myerson; Allan S., et al. 75/725; 423/109 423/150.3 423/27 423/622 423/623 423/89 423/92 423/98 75/724. C22B019/24.
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- ☐ 6. 5405509. 30 Jun 93; 11 Apr 95. Remediation of a bulk source by electropotential ion transport using a host receptor matrix. Lomasney; Henry L., et al. 205/688; 204/515 205/742 205/760 205/761 205/766 588/10 588/2 588/20 588/204 588/6 588/7 588/8 588/9. C02F001/46 C02F001/469 G21F009/04 G21F009/16.
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- ☐ 7. 5206195. 29 May 91; 27 Apr 93. Stabilized synthetic zeolite and a process for the preparation thereof. Ando; Satoshi, et al. 502/64; 423/701 423/713 502/60 502/62. B01J020/18 C01B033/34.
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- ☐ 8. 5190907. 29 Mar 91; 02 Mar 93. Granulated inorganic sorbent and method of its manufacture. Sharygin; Leonid M., et al. 502/400; 210/683 423/213.2 423/213.5 423/593 423/598 502/405 502/5. B01J020/06 C01G019/02 B01D053/02.
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- ☐ 9. 4427034. 27 Aug 81; 24 Jan 84. Coating composition for protecting inner surface of tubes in heat exchangers. Nagata; Koji, et al. 138/145; 106/244 138/143 138/38 138/DIG.6 165/133 165/914 524/188 524/456 524/714. F16L009/14.
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- ☒ 10. 4423158. 27 Jan 83; 27 Dec 83. Ion adsorbent for metals having a coordination number greater than two. Porath; Jerker O.. 521/32; 521/25 521/27 536/102 536/112 536/56. B01J039/18.
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- ☐ 11. 4375199. 06 Feb 81; 01 Mar 83. Submersible or semi-submersible structures. Graeme-Barber; Christopher, et al. 114/222; 114/67R. B63B059/02.
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- ☐ 12. 4336247. 14 Jul 80; 22 Jun 82. Body system nutrient material. Eriksen; Arthur E.. 424/547; 426/385 426/544 426/72 514/474. A61K031/365 A61K035/12 A61K035/56.
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- ☐ 13. 4280794. 19 Mar 79; 28 Jul 81. Sacrificial anodic protector kit for a propeller shaft.

Goodwin; Wendell W.. 416/146R; 416/245A. B63H023/34.

☐ 14. 3986938. 19 Jun 74; 19 Oct 76. Direct contact of low-boiling, water-immiscible medium with hot and cold bodies of water to transfer heat for purposes of energy production and/or desalination. Smith, Jr.; Calvin S.. 203/11; 159/903 159/DIG.33 202/173 202/234 203/73. B01D001/00 B01D003/02 B01D003/00 B01D003/10.

☐ 15. 3940470. 29 Nov 72; 24 Feb 76. Direct recovery of metals from fluid anhydrous metal halides derived from marine nodule halidation. Kane; William S., et al. 75/400; 423/139 423/149 423/150.4 423/24 423/32 423/44 423/46 423/49 423/491 423/493 423/DIG.4. C01G003/00 C01G045/00 C01G051/00 C01G053/00.

☒ 16. 3763049. 16 Jul 71; 02 Oct 73. PROCESS FOR THE CONTINUOUS RECOVERY OF MATERIALS FROM SEA WATER. Gerber; Arthur M.. 252/625; 423/181 423/21.1 423/22 423/24 423/63 423/7 423/DIG.4. C09h003/00.

☐ 17. 3715339. 09 Dec 70; 06 Feb 73. CHELATION POLYMER FROM NITRILO COMPOUND AND ETHYLENEIMINE COMPOUND. Rainer; Norman B.. 525/417; 210/688 521/25 525/540 528/312 528/313 528/315 528/328 528/341 528/342 528/350. C08g020/06.

☐ 18. 3663306. 06 Nov 68; 16 May 72. HIGH PRESSURE RESISTANT COMPACT HOUSING STRUCTURE. Des Champs; Nicholas Howard, et al. 136/202; 174/17R 976/DIG.416. G21h001/10.

☐ 19. 3661506. 03 Sep 69; 09 May 72. MEANS AND METHOD OF ELIMINATING AND CONTROLLING MARINE FOULING. Watkins; Lucius D.. 422/6; 114/67R 239/53 239/57 405/211 422/7 43/131 514/751 514/758 52/101 52/517. A01n017/00 A01n023/00.

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Terms	Documents
11 and sponge	19

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☐ 1. 20020132126. 25 Oct 01. 19 Sep 02. Preventing corrosion with beneficial biofilms. Wood, Thomas K., et al. 428/457; 427/430.1 B05D001/18 B32B015/04.

☐ 2. 5780290. 05 Jun 95; 14 Jul 98. Non-polluting compositions to degrade hydrocarbons and microorganisms for use thereof. Rosenberg; Eugene, et al. 435/243; 210/601 210/922 435/244 435/252.1 435/262.5 435/281 435/821 435/826 435/834. C12N001/00 C12N001/38.

☐ 3. 4122012. 27 Jul 77; 24 Oct 78. Sea water desalinization system. Vlasnik; Lincoln A.. 210/170; 405/52. E02B011/00.

☐ 4. 3824866. 16 Apr 73; 23 Jul 74. APPARATUS FOR GENERATING A WOBBLE MOTION. Schatz; Paul. 74/61;. F16h033/00.

☐ 5. 3635799. 31 Jan 69; 18 Jan 72. PORTABLE STILL WITH CONCENTRIC-VAPORIZING, RESERVOIR AND COLLECTION CHAMBERS. Lowi, Jr.; Alvin. 202/83; 202/176 202/185.3 202/187 202/197 202/202 203/10. B01d003/00.

☐ 6. 3616928. 02 Oct 69; 02 Nov 71. PERMEATION SEPARATION DEVICE FOR SEPARATING FLUIDS. Rosenblatt; Naftali Walter. 210/321.8; 210/321.9 96/8. B01d013/00.

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Terms	Documents
11 with (bacteria or cyanobacteria or bacillus or acetobactor or citrobactor)	6

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=> d his

(FILE 'HOME' ENTERED AT 16:36:02 ON 13 NOV 2002)

FILE 'MEDLINE, CAPLUS, BIOSIS, SCISEARCH' ENTERED AT 16:36:28 ON 13 NOV 2002

L1 1413 S (METAL OR MINERAL OR GOLD OR SILVER OR CUPPER) (6A) SEA(W) WATER
L2 1420 S SPONGE AND BACTERIA
L3 0 S L1 AND L2
L4 2 S L1 AND SPONGE
L5 21 S L1 AND (BACTERIA OR CYANOBACTERIA OR BACILLUS OR CITROBACTER
L6 2 DUP REM L4 (0 DUPLICATES REMOVED)
L7 18 DUP REM L5 (3 DUPLICATES REMOVED)

=> d au ti so ab 1-2 16

L6 ANSWER 1 OF 2 CAPLUS COPYRIGHT 2002 ACS
IN Hilbertz, Wolf H.; Goreau, Thomas J.
TI Method of enhancing the growth of aquatic organisms and structures created
thereby
SO U.S., 14 pp., Cont.-in-part of U.S. Ser. No. 374,993, abandoned.
CODEN: USXXAM

AB A method is disclosed for enhancing the growth of aquatic organisms in an
aq. **mineral**-contg. electrolyte such as **sea**
water which comprises: (1) installing a cathode and an anode in
the electrolyte, (2) applying a steady, pulsed or intermittent direct
elec. current across the cathode and the anode to effect electrolysis, (3)
providing accreted mineral material on the cathode, (4) recruiting aquatic
organisms on or in the vicinity of the cathode, and (5) creating by
electrolysis conditions of higher alkyl. in the electrolyte in the vicinity
of the cathode than in the electrolyte remote from the cathode to cause
growth of the aquatic organisms in the conditions in the vicinity of the
cathode, the placement of the anode being done in such a way as to
minimize the effects of HCl produced at the anode. The method is
particularly described with ref. to the growth of organisms which deposit
calcareous substances, such as corals, for the creation of artificial
reefs or coastal defense structures (e.g., groins, sea walls). The
invention is also useful in mariculture facilities, such as
oyster-producing installations, where the shellfish or other grown
organism is harvested.

L6 ANSWER 2 OF 2 CAPLUS COPYRIGHT 2002 ACS
AU Noddack, Ida; Noddack, Walter
TI The occurrence of the heavy metals in marine animals
SO Arkiv Zool. (1939), 32A(No. 1;Contrib. No. 4), 35 pp.
AB The optical investigation of the ash of 9 species of marine animals
revealed, in addn. to the lines of the heavy metals, those of Ca, Mg, Na
and K, as well as fainter lines of Al but not of Be. The Ca was always
accompanied by small amts. of Sr and traces of Ba. The ash of the
sponges, sea anemones, sea urchins and starfish furnished distinct
lines of B; the concn. of B lay between 10-5 and 10-6. Ti, V, Cr, Mo, Mn,
Fe, Co, Ni, Cu, Ag, Au, Zn, Cd, Ga, Tl, Ge, Sn, Pb, As, Sb and Bi were
detd. in Ciona intestinalis, Halichondria (I), Cyanea capillata (II),
Metridium dianthus (III), Stichopus tremulus, Brissopsis lyrifera (IV),
Asterias rubens, Ctenolabrus rupestris (V) and Squalus acanthius. In some
cases Sc, W, Th and Pt were present but could not be estd.; their concns.
in the dry material were in all cases below 1 .times. 10-9. Zr, Hf, Cb,
Ta, U, Re, Ru, Os, Rh, Ir, Pd and In could not be detected in the ash;
their concns. in the dry substance in all the species studied were
probably less than 10-9. Some of the metals, especially Mn, Fe, Ni and
Zn, were in all cases also detd. by the quant. rontgen spectroscopic
analysis. The optically found data never deviated from the rontgen
spectroscopic data by more than .+- .20%. The concns. of the metals, which
were estd. in the whole animals, varied from 0.007 .times. 10-6 (0.007

mg./kg.) for Au in II and III to 1550 .times. 10⁻⁶ for Zn in II and 2500 .times. 10⁻⁶ for Fe in I. Although many of the metals are present in still smaller concns., the Zn and Fe values represent the highest concns. of heavy metals and are exceeded only by the light metals and the organogens. The total content of heavy metals varied from 643 .times. 10⁻⁶ for V to 2817 .times. 10⁻⁶ for I. In general, the concn. of the heavy metals is greater in the organism than in the sea water. On an av., V showed the highest accumulation, Sb perhaps the lowest. The av. concn. factor of an element in the species studied is obtained by dividing the av. concn. of the element in all the animals by the concn. of the element in sea water. Most of the av. concn. factors lie between 1000 and 30,000. On the whole, the lower animals seem to contain more heavy metals than the higher. Markedly high values of certain elements are found in some species, e. g., V in the sea squirts, Mo in the sea anemones, Co in the jellyfish and small fish, Ag in the small fish, Zn, Sn and Pb in the jellyfish and sea anemones, and As and Cd in the jellyfish. In all the animals studied, Ti, Fe, Cu, Au, Ga, Tl, Ge, Sb and Bi show a relatively uniform accumulation compared with sea water. The relatively small variations of most of the av. concn. factors suggest that the heavy metals, in the dissolved or colloidal state, with the sea water, reach the tissues and are there retained as difficultly sol. compds. or by adsorption. If this filter action is the only reason for the accumulation of the metals, it must be controlled by 2 factors: the frequency of the heavy metals in the sea water, and the tendency of the metals to form difficultly sol. compds. in the organism. Cr, Au, Ga, Tl, Sb and Bi, which have no special points of accumulation in the species studied, have the smallest and most similar concn. factors (about 1000). These elements may be assumed to have been deposited on the passage of the water through the tissues and to exert no special functions there. The comparison of the av. concn. factors with the tendency of the single metals to form difficultly sol. compds. reveals no regularity. V, Mo, Co, Ag, Cd, As and Zn, to a lesser degree Mn, Fe, Ni and Cu, and probably also Ti and Ge, show points of marked accumulation in the individual species; this indicates that these elements have special functions in the animals in question.

=> d bib 16

L6 ANSWER 1 OF 2 CAPLUS COPYRIGHT 2002 ACS
 AN 1996:506452 CAPLUS
 DN 125:137238
 TI Method of enhancing the growth of aquatic organisms and structures created thereby
 IN Hilbertz, Wolf H.; Goreau, Thomas J.
 PA Ire.
 SO U.S., 14 pp., Cont.-in-part of U.S. Ser. No. 374,993, abandoned.
 CODEN: USXXAM

DT Patent
 LA English

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	US 5543034	A	19960806	US 1995-519897	19950828
PRAI	US 1995-374993		19950119		

=> d 1-18 au ti so 17

L7 ANSWER 1 OF 18 MEDLINE DUPLICATE 1
 AU Brandi G; Sisti M; Giardini F; Schiavano G F; Albano A
 TI Survival ability of cytotoxic strains of motile Aeromonas spp. in different types of water.
 SO LETTERS IN APPLIED MICROBIOLOGY, (1999 Oct) 29 (4) 211-5.

Journal code: 8510094. ISSN: 0266-8254.

- L7 ANSWER 2 OF 18 SCISEARCH COPYRIGHT 2002 ISI (R)
AU Rousse N (Reprint); Boulegue J; Cosson R P; FialaMedioni A
TI Bioaccumulation of metals within the hydrothermal mytilidae Bathymodiolus
sp. from the Mid-Atlantic Ridge.
SO OCEANOLOGICA ACTA, (JUL-AUG 1998) Vol. 21, No. 4, pp. 597-607.
Publisher: GAUTHIER-VILLARS/EDITIONS ELSEVIER, 23 RUE LINOIS, 75015 PARIS,
FRANCE.
ISSN: 0399-1784.
- L7 ANSWER 3 OF 18 CAPLUS COPYRIGHT 2002 ACS
AU Zhang, Jingrong; Lu, Jianjun; Zhai, Jianping; Yang, Fan
TI Simulating experiments on enrichment of gold by **bacteria** and
their geochemical significance
SO Chinese Journal of Geochemistry (1997), 16(4), 369-373
CODEN: CJGEEV; ISSN: 1000-9426
- L7 ANSWER 4 OF 18 SCISEARCH COPYRIGHT 2002 ISI (R)
AU LITTLE B (Reprint); WAGNER P; MANSFELD F
TI MICROBIOLOGICALLY INFLUENCED CORROSION OF METALS AND ALLOYS
SO INTERNATIONAL MATERIALS REVIEWS, (1991) Vol. 36, No. 6, pp. 253-272.
ISSN: 0950-6608.
- L7 ANSWER 5 OF 18 CAPLUS COPYRIGHT 2002 ACS DUPLICATE 2
AU Andreyuk, E. I.; Yanover, S. B.; Kopteva, Zh. P.; Naumenko, N. F.;
Zvyagintseva, N. P.; Lyakh, E. P.; Petrov, V. G.
TI Formation of a microbic film on the surface of certain nonferrous
metal alloys in sea water
SO Mikrobiologicheskii Zhurnal (1978-1993) (1985), 47(1), 7-13
CODEN: MZHUDX; ISSN: 0201-8462
- L7 ANSWER 6 OF 18 SCISEARCH COPYRIGHT 2002 ISI (R)
AU DHAR H P (Reprint); HOWELL D W; BOCKRIS J O
TI THE USE OF INSITU ELECTROCHEMICAL REDUCTION OF OXYGEN IN THE DIMINUTION OF
ADSORBED **BACTERIA ON METALS IN SEA-
WATER**
SO JOURNAL OF THE ELECTROCHEMICAL SOCIETY, (1982) Vol. 129, No. 10, pp.
2178-2182.
- L7 ANSWER 7 OF 18 CAPLUS COPYRIGHT 2002 ACS
AU Jones, Galen E.; Cobet, Andre B.
TI Heavy metal ions as the principal bactericidal agent in Caribbean sea
water
SO Discharge Sewage Sea Outfalls, Proc. Int. Symp. (1975), Meeting Date 1974,
199-208. Editor(s): Gameson, A. L. H. Publisher: Pergamon, Oxford, Engl.
CODEN: 31UKAA
- L7 ANSWER 8 OF 18 BIOSIS COPYRIGHT 2002 BIOLOGICAL ABSTRACTS INC.
AU WATANABE I
TI CONTAMINATION OF THE WATER OF HEITA BAY DUE TO RECLAMATION WITH SLAGS FROM
A STEEL FACTORY IN KAMAISHI-SHI.
SO J FAC AGRIC IWATE UNIV, (1974) 11 (4), 307-315.
CODEN: IDNHAR. ISSN: 0579-2746.
- L7 ANSWER 9 OF 18 BIOSIS COPYRIGHT 2002 BIOLOGICAL ABSTRACTS INC.
AU SHTEVNEVA A I; LEBEDEVA M N; MEL'NICHUK E P; PANINA O A
TI THE ROLE OF BACTERIAL OVERGROWTH IN DESTRUCTION OF SOME **METAL**
MATERIALS IN SEA WATER.
SO GIDROBIOL ZH, (1973) 9 (3), 12-20.
CODEN: GBZUAM. ISSN: 0375-8990.
- L7 ANSWER 10 OF 18 BIOSIS COPYRIGHT 2002 BIOLOGICAL ABSTRACTS INC.
AU SHTEVNEVA A I; LEBEDEVA M N; MEL'NICHUK YE P; PANINA O A

TI BACTERIAL OVERGROWTH AS A FACTOR IN **METAL** CORROSION IN
SEA WATER.
 SO Hydrobiol. J. (Engl. Transl.), (1973 (RECD 1974)) 9 (3), 1-9.
 CODEN: HYBJA7. ISSN: 0018-8166.

L7 ANSWER 11 OF 18 CAPLUS COPYRIGHT 2002 ACS
 AU Compton, K. G.
 TI Effect of aerobic marine **bacteria** on the corrosion of
metals in sea water
 SO U. S. Office Saline Water, Res. Develop. Progr. Rep. (1971), No. 662, 33
 pp.
 CODEN: XISWAP

L7 ANSWER 12 OF 18 CAPLUS COPYRIGHT 2002 ACS
 IN Waltrip, Owen R.
 TI Electrochemical, selective separation of chemical constituents in
 solutions or suspensions
 SO Ger. Offen., 25 pp.
 CODEN: GWXXBX

L7 ANSWER 13 OF 18 CAPLUS COPYRIGHT 2002 ACS
 AU Malone, Philip G.; Towe, K. M.
 TI Microbial carbonate and phosphate precipitates from sea water cultures
 SO Mar. Geol. (1970), 9(5), 301-9
 CODEN: MAGEA6

L7 ANSWER 14 OF 18 CAPLUS COPYRIGHT 2002 ACS
 AU Southwell, Charles R.; Alexander, Allen Leander
 TI Corrosion of metals in tropical waters. Structural ferrous metals
 SO Mater. Prot. (1970), 9(1), 14-23
 CODEN: MAPRAM

L7 ANSWER 15 OF 18 CAPLUS COPYRIGHT 2002 ACS
 AU Kemkhadze, Z. V.
 TI Corrosive action of some types of marine **bacteria**
 SO Vop. Metalloved. Korroz. Metal. (1968), 194-8. Editor(s): Tavadze, F. N.
 Publisher: Izd. "Metsniereba", Tbilisi, USSR.
 CODEN: 21GRAI

L7 ANSWER 16 OF 18 CAPLUS COPYRIGHT 2002 ACS
 AU Hundekar, A. M.; Sen, Dwijendra N.; Srinivasan, K. S.; Thankarajan, N.
 TI Potable water from sea water using briquetted silver barium zeolite
 SO Indian J. Appl. Chem. (1965), 28(6), 203-7
 CODEN: IJACAN

L7 ANSWER 17 OF 18 CAPLUS COPYRIGHT 2002 ACS
 AU Zedler, Robert J.
 TI Tin chemical prevents biological fouling
 SO Metal Finishing (1962), 60(No. 12), 57

L7 ANSWER 18 OF 18 MEDLINE
 AU GEVAUDAN P; GAY R
 TI [Is it possible to revise the filtration concept in edible lamellibranch
 molluscs? Study of the absorption & elimination of **mineral** &
 bacterial particles in a **sea water** suspension by the
 common mussel].
 Faut-il reviser la notion de filtration chez les mollusques
 lamellibranches comestibles? Contribution `a l'etude de l'absorption et de
 l'elimination des particules minerales et des bacteries en suspension dans
 l'eau de mer chez la moule commune.
 SO Rev. hyg. med. sociale, (1958 Apr-May) 6 (3) 275-87.